

FURTHER REPORT OF OPERATION FOR EPILEPSY SEVEN YEARS AFTER. COMPLETE RECOVERY.¹

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IT may be interesting to see and examine a case of epilepsy operated upon with such absolute success. This boy, or rather young man, I reported five years ago.² It occurred in the service of Dr. Weir Mitchell, and the operation was performed by Dr. T. G. Morton in the Orthopædic Hospital. The early history in brief was this: W. B., a perfectly healthy boy, of wholesome antecedents, fell at the age of two years and eleven months a distance of fifteen or eighteen feet, fracturing his skull over the right parietal prominence; no convulsion at the time, and the wound promptly healed. Soon after there began occasional slight spasms, beginning with an aura, starting up the left forefinger and thumb, and limited to the arm. Later these increased, and a fuller description from the young man himself differs somewhat from the earlier notes, but is probably accurate because he is intelligent and quite positive on the subject. These smaller spasms the parents considered outgrown, and ended for a year or two. The first general convulsion occurred at the age of about ten years while in school, being rather excited over an unusual effort in arithmetic. While working very hard to accomplish the task, he noticed a greatly increased activity in the spasmodic opening and closing of the left forefinger and thumb, a phenomenon observed before, but held of small account. Presently the whole hand stiffened, the fingers clenched, the wrist flexed violently upon the arm, the arm flexed at the elbow, and was carried forcibly up under the axilla; the left side of the mouth was drawn down, then the left leg became some-

¹ Case exhibited at the Philadelphia Neurological Society, December 17, 1894.

² *Ann Gyn. and Pædiatry*, August, 1890.

what like the arm, and finally he fell. Other attacks, usually superinduced by some mental or emotional excitement, occurred like this once or twice a month. The aura gave from a minute to a minute and a half warning, and the attacks could often be successfully controlled by a powerful effort on the patient's part or that of his parents to unlock the contracted parts persistently with the right hand, and to rub the palm vigorously. After the convulsions, during the period in which they were most severe, both the arm and leg were entirely paralyzed as to motion and sensation for an hour or two, then rapidly recovered. The boy was conscious throughout the seizure. He could hear and see plainly, yet was unable to move or speak, soon becoming vividly conscious of the absence of the arm and leg as the paralysis grew complete, and he would habitually ask to have the damaged arm placed in the sound hand so as to assure himself of its presence. When in the progress of the seizure the inevitable fall was about to occur the lad was always able to guide himself in a way so as to avoid receiving undue damages, and to especially protect the tender spot in the head by partly adjusting himself. If he were to lie on the right side the convulsions would continue, and it was necessary that he should be turned on his left for it to cease. Cold water or ice applied to the tender spot had the effect of limiting the convulsion.

Examination of the lesion, December 12, 1886 (this was before the crytometer had come into use), showed absence of bone over an irregular area (see diagram which I made at the time of the first examination) about two and one-half inches long vertically, starting two inches behind and in a horizontal line with the top of the external meatus of the right ear, and extending to within an inch of the vertex. The opening at its greatest width above the middle line was about one and three-quarter inches. On the posterior edge of the opening was a pointed mass of bone, elastic to the touch, pressure upon which produced a most sickening pain, and if continued induced a severe general convulsion. Also at that time the left hand and arm were of lessened development and vigor; not so the leg; knee-jerk excessive on both sides; station good; heart perfectly sound.

Examination of the eyes by Dr. George de Schweinitz showed the following:

Vision, each eye.—Amplitude of accommodation

diminished 3°. Reflex and associated movements of the iris normal. No muscular anomalies, except insufficiency of the internal recti of 6°.

Ophthalmoscope.—Right eye: Round nerve healthy color. Slight absorbing conus, outer side. Along the nasal artery small black spots, the questionable remains of hæmorrhage. Refraction H. Left eye normal, natural color; blotchy pigment conus at outer side; veins somewhat tortuous; macula normal. Refraction H. Central color perception good; fields of vision for form and color normal.

Diagnosis.—Hypermetropia and slight astigmatism, with insufficiency of internal recti. No appearance in fundus not explained by this error of refraction.

Operation March, 1887.—Dr. Morton, on lifting the scalp, found no spicules of bone projecting into the brain, but owing to the irregularities of the edges of the bony opening, certain pointed masses pressed severely upon the cortical substance. These acted as obvious causes for the convulsions, and they were carefully trimmed away, not disturbing the dura. No bone was replaced the scalp was carefully readjusted. The recovery was uninterrupted and rapid.

Description of W. B., December 17, 1894, as exhibited to the Philadelphia Neurological Society: Aged twenty-one and a half years, height five feet seven, weight one hundred and thirty-five; has enjoyed perfectly good health since the operation; is a powerful, muscular mechanic, earning an excellent livelihood as an artistic tile-setter. There has been no convulsion, except possibly a partial one soon after the operation, on which point is some doubt. The opening in the skull is still about as large as described in 1890. This is a depressed area, pulsating regularly, varying in depth in accordance with trifling disturbances of health. He very rarely has headaches, and only when touched or struck on this spot; then the pain is localized there. No considerable blow has been received, except one about two months ago. A companion playfully threw a soaked paper ball the size of an orange, striking him fairly on the tender place. Falling instantly to the floor, he suffered for some hours thereafter intense pain. The left arm is about three-eighths of an inch less in length than the right; but the chief difference resides in the hand, the left being fully a half inch shorter than the right, and the whole member proportionately small. The legs seem

precisely similar; the buttock lines are symmetrical; the left foot is smaller than the right, but no more, perhaps, than is natural.

The points of special interest here are: First, the entire relief to the convulsions. Second, perfect recovery of functional activity of the limbs. Third, entire absence of spasticity or other damage to the motor tracts except only the lessened development of the one arm and hand which is confined to size and not modifying strength to any considerable extent. Fourth, perfect co-ordination, normal growth and development of intelligence.

The Therapeutic Utility of Trional.—Dr. B. Rohmer. Inaugural Dissertation presented to the University of Strassburg, 1894. The remedy was employed in twenty-nine cases in which sleep, was disturbed by restlessness, bodily pains or irritating cough. In all but one case trional was found to possess hypnotic properties, and in twelve of these the effect was always the same, although the period of administration extended over several weeks. In seven cases the effect was weakened or lost in the course of time, necessitating an increase of dose. In some cases the apparent cause of this was the presence of bodily pains which exerted an inhibitory influence upon the action of Trional. Thus, in a case where sleep of ten hours' duration resulted from the 15 grains given the first evening, the effect of the same dose given on the following day was completely counteracted by the presence of toothache. That the pain must, however, attain a more or less high degree of intensity in order to neutralize the action of the remedy is demonstrated by a case of *tabes dorsalis* in which sleep could not be induced by morphine, but followed administration of one-half drachm trional. The author's experience further demonstrates that the action of a single dose may extend over several nights, although he was unable to confirm the observations of others that the effect is developed on the average in the course of half an hour. Even in the case where its action was pronounced, sleep frequently failed to appear until the end of two hours. The duration of the effect varied from two and one-half to ten hours. Sleep was deep and quiet and the patients rarely experienced any disturbances on waking. Judging from its behavior in two cases of cardiac disease, trional seems to be devoid of tonic influence upon the circulatory system. After prolonged administration no disturbances resulted when it was discontinued. Rohmer's observations conform, therefore, in the main to the experience of other observers. He regards the remedy as especially indicated in psychiatric practice, and recommends its use in simple insomnia and even where this condition is due to pain. The doses varied from a half to two scruples given in wafers. J. C.